

REMARKS

This communication is in response to the Office Action mailed on December 28, 2004. In the Office Action, claims 1-15 were pending of which claims 1-15 were rejected.

The Office Action reports that claim 15 was rejected under 35 U.S.C. §112 because claim 15 was a multiple dependent claim depending on claims 1-14. Claim 15 has been amended as independent and incorporates some aspects of claim 1. It is believed that claim 15 satisfies the requirements of 35 U.S.C. §112.

Claims 1-14 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. patent no. 6,246,981 to Papineni et al. (hereinafter Papineni).

Claim 1 has been amended to recite a man-machine dialogue system comprising an interactive computer system with: an input device for receiving input from a user; an output device for generating output to a user; an object system which is an information source or store, or a command and control device, the object of the dialogue being to interface between this system and a user; a dialogue manager, which controls the dialogue between the object system and a user dependent upon: a dialogue specification, comprising a set of augmented transition networks (ATNs), having a set of states through which are propagated one or more tokens, each token comprising a set of fields which together define a current state of belief of a dialogue controller for the user's reply to a question posed by the dialogue manager, dependent upon the preceding user-system interchanges and information obtained from the object system.[emphasis added]

Claim 1 has been amended to clarify that each token defines a current state of belief for the user's reply to a question posed by the dialogue manager. For example, FIG. 2 illustrates block 10 as "ask for data". Also, the present specification provides the following:

User interaction consists of a sequence of question/answer cycles where each question is designed to elicit some specific information. [Specification, page 5, lines 24-26]

Thus, the user's input is responsive to the dialogue manager's communications.

In contrast, it is believed that Papineni's user input is declarative and intended to cause a response by the dialogue manager back to the user. This response can be a request for additional information or performing a task. [Col. 9, lines 30-35] Thus, the information exchange is believed to be in the opposite direction compared with the present inventions.

Further, it is believed that Papineni discloses a conversational system 4 with a hub/spoke system for moving information from a user to the task-oriented dialog manager. Importantly, language understanding unit 30 is shown as a separate module from dialog manager 40. Thus, it is submitted that Papineni's user input is processed by language understanding unit 30 (e.g. by a statistical parser) before a representation of the user's statement is forwarded to dialog manager 40. [See Col. 8, line 19-26] Individual words or groups of words are tagged with tags such as "null", "buy", "fund-buy" in order to understand or represent a user's request or declaration. [See Col. 8, lines 38-45]

However, in the present inventions as recited in claim 1, understanding of a user's input statement is placed within the dialogue manager (not a separate module). Claim 1 includes the feature of one or more tokens where each token comprises a set of fields which together define a current state of belief of a dialogue controller. This current state of belief is the dialogue controller's understanding of the user's reply to a question.

Finally, it is noted that the present application provides relative advantages of tokens that pass through the "whole operation of the system, not solely from the speech

recognition, speech output, or dialogue control" including time savings and less complexity. It is believed that the Papineni hub/spoke system with its separate natural language understanding module and dialog manager, etc. is the type of complex system that the present inventions are meant to simplify.

In light of the foregoing, claim 1 is believed to be patentable over the cited art. Claims 2-14 depend on claim 1 and are believed to be separately patentable. Reconsideration and allowance of claims 1-14 are respectfully requested. With respect to claim 15, the above remarks are incorporated by reference. Favorable action on claim 15 is solicited.


Claims 16-20 are new and generally include claims drawn to a method and/or computer readable medium. Claims 16-20 are presented for examination and favorable action.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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